

IN THE CLAIMS

Please amend the claims as follows. This listing of claims replaces all prior versions.

1. (Currently amended) An isolated nucleic acid ~~that hybridizes to a tobacco-quinolate phosphoribosyl-transferase messenger RNA under a wash stringency of 0.3M NaCl, 0.03M sodium citrate, and 0.1% SDS at 60° to 70°C, wherein said nucleic acid comprises at least 30 consecutive nucleotides of SEQ ID NO:1 or its complement~~comprising a nucleotide sequence selected from the group consisting of:

a) a nucleotide sequence comprising at least 20 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

b) a nucleotide sequence comprising at least 30 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

c) a nucleotide sequence comprising at least 50 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

d) a nucleotide sequence comprising at least 75 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

e) a nucleotide sequence comprising at least 100 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

f) a nucleotide sequence comprising at least 125 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

g) a nucleotide sequence comprising at least 150 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

h) a nucleotide sequence comprising at least 200 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

i) a nucleotide sequence comprising at least 13 to 15 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

j) a nucleotide sequence comprising at least 16 to 21 consecutive nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1;

and

k) a nucleotide sequence having at least 95% identity with the nucleotide sequence of any of (a)-(j) above.

2. (Previously presented) A nucleic acid construct comprising, in the 5' to 3' direction, a promoter operable in a plant cell and the nucleic acid according to claim 1 positioned downstream from said promoter and operatively associated therewith.

3-11. (Canceled).

12. (Currently amended) A plant cell comprising the nucleic acid construct according to claim 2 ~~or 3~~.

13. (Currently amended) A ~~transgenic~~-tobacco plant comprising the plant cell of claim 12.

14-15. (Canceled).

16. (Currently amended) A method of making a ~~transgenic~~-tobacco plant cell having reduced quinolate phosphoribosyl transferase (QPRTase) expression, said method comprising introducing the nucleic acid ~~construct~~ of claim 21 into the tobacco plant cell to produce a ~~transgenic~~ tobacco plant cell having reduced quinolate phosphoribosyl transferase expression as compared to a control tobacco plant cell ~~lacking the nucleic acid construct of claim 2~~.

17-18. (Canceled).

19. (Previously presented) The method of claim 16, wherein said tobacco plant cell is a Burley variety.

20-25. (Canceled).

26. (Currently amended) A method of producing a transgenic tobacco seed, comprising collecting a seed from the ~~transgenic~~ tobacco plant of claim 13 ~~or 31~~ or a progeny thereof, wherein said tobacco seed ~~comprises the nucleic acid according to claim 1~~ is a transgenic tobacco seed.

27-30. (Canceled).

31. (Currently amended) A reduced nicotine ~~transgenic~~ tobacco plant comprising ~~[[:]]~~ an exogenous nucleic acid comprising construct comprising, in the 5' to 3' direction, a promoter and the nucleic acid according to claim 1, operably associated with said promoter; wherein said tobacco plant has a reduced amount of nicotine as compared to a ~~non-transformed~~ control tobacco plant.

32-42. (Canceled).

43. (Previously presented) A progeny of a plant according to claim 13 or 31, wherein said progeny is a transgenic plant.

44. (Currently amended) A seed of a tobacco plant according to claim 13 or 31, 13, 31 or 43 or a progeny thereof, wherein said seed ~~comprises the nucleic acid according to claim 1~~ is a transgenic seed.

45. (Currently amended) A crop comprising a plurality of plants according to claim 13 or 31, 13, 31 or 43, or a progeny thereof, wherein said progeny is a transgenic plant, planted together in an agricultural field.

46-56. (Canceled).

57. (Previously presented) A method of producing a reduced nicotine tobacco plant comprising:

a) introducing the nucleic acid of claim 1 into a tobacco plant cell so as to obtain a transformed tobacco plant cell, wherein said transformed tobacco plant cell has reduced expression of a quinolate phosphoribosyl transferase gene as compared to a non-transformed tobacco plant cell; and

b) regenerating the transformed tobacco plant cell into a reduced nicotine tobacco plant.

58-94. (Canceled).

95. (Currently amended) ~~The nucleic acid of claim 1, comprising at least about 50 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1 or its complement~~An isolated nucleic acid comprising a nucleotide sequence selected from the group consisting of:

a) a nucleotide sequence comprising at least 20 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

b) a nucleotide sequence comprising at least 30 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

c) a nucleotide sequence comprising at least 50 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

d) a nucleotide sequence comprising at least 75 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

e) a nucleotide sequence comprising at least 100 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

f) a nucleotide sequence comprising at least 125 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

g) a nucleotide sequence comprising at least 150 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

h) a nucleotide sequence comprising at least 200 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

i) a nucleotide sequence comprising at least 13 to 15 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1;

j) a nucleotide sequence comprising at least 16 to 21 consecutive nucleotides of the nucleotide sequence of SEQ ID NO:1; and

k) a nucleotide sequence having at least 95% identity with the nucleotide sequence of any of (a)-(j) above.

96-102.(Canceled).

103. (Currently amended) The nucleic acid of claim ~~49~~5, wherein the nucleic acid is DNA.

104. (Currently amended) The nucleic acid of claim ~~49~~5, wherein the nucleic acid is RNA.

105. (Currently amended) A ~~vector~~nucleic acid construct comprising the nucleic acid of claim ~~49~~5.

106. (Currently amended) A transformed cell comprising the ~~vector~~nucleic acid construct of claim 105.

107. (Currently amended) The nucleic acid of claim ~~49~~5, further comprising a detectable moiety.

108. (New) A method for reducing quinolate phosphoribosyl transferase expression in a plant cell, comprising transforming said plant cell with an exogenous DNA construct comprising the nucleic acid of claim 95, wherein transcription of said nucleic acid produces a transcribed nucleic acid that is complementary to quinolate phosphoribosyl transferase messenger RNA, resulting in reduced quinolate phosphoribosyl transferase expression in said plant cell as compared to a control plant cell.

109. (New) A method for decreasing the amount of nicotine in leaves of a tobacco plant, comprising:

- a) transforming a tobacco plant cell with an exogenous DNA construct comprising the nucleic acid of claim 95, wherein transcription of said nucleic acid produces a transcribed nucleic acid that is complementary to quinolate phosphoribosyl transferase messenger RNA; and
- b) producing a transgenic tobacco plant from said transformed tobacco plant cell, wherein said transgenic tobacco plant has a decreased amount of nicotine in leaves of said transgenic tobacco plant as compared to a control tobacco plant.

110. (New) A transformed plant cell having reduced quinolate phosphoribosyl transferase expression, wherein said transformed plant cell comprises an exogenous DNA construct comprising the nucleic acid of claim 95, wherein transcription of said nucleic acid produces a transcribed nucleic acid that is complementary to quinolate phosphoribosyl transferase messenger RNA, resulting in reduced quinolate phosphoribosyl transferase expression in said plant cell as compared to a control plant cell.

111. (New) A reduced nicotine tobacco plant, comprising:

an exogenous DNA construct comprising the nucleic acid of claim 95, wherein transcription of said nucleic acid produces a transcribed nucleic acid that is complementary to quinolate phosphoribosyl transferase messenger RNA, resulting in a tobacco plant having a reduced amount of nicotine as compared to a control tobacco plant.

112. (New) A progeny of the tobacco plant of claim 111, wherein said progeny is a transgenic tobacco plant.

113. (New) A method of making a transgenic tobacco plant cell having reduced quinolate phosphoribosyl transferase (QPRTase) expression, said method comprising introducing the nucleic acid construct of claim 105 into the tobacco plant cell to produce a transgenic tobacco plant cell having reduced quinolate phosphoribosyl transferase expression as compared to a control tobacco plant cell.

114. (New) A method of producing a transgenic tobacco seed, comprising collecting a seed from the tobacco plant of claim 111 or a progeny thereof, wherein said tobacco seed is a transgenic tobacco seed.

115. (New) A seed of a tobacco plant according to claim 111 or a progeny thereof, wherein said seed is a transgenic seed.

116. (New) A crop comprising a plurality of plants according to claim 111, or a progeny thereof, wherein said progeny is a transgenic plant, planted together in an agricultural field.

117. (New) A method of producing a reduced nicotine tobacco plant comprising:

a) introducing the nucleic acid construct of claim 105 into a tobacco plant cell so as to obtain a transformed tobacco plant cell, wherein said transformed tobacco plant cell has reduced expression of a quinolate phosphoribosyl transferase gene as compared to a non-transformed tobacco plant cell; and

b) regenerating the transformed tobacco plant cell into a reduced nicotine tobacco plant.